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Award Number: W81XWH-05-1-0283

TITLE: The Hygiene Hypothesis and Breast Cancer A Novel Application of an Etiologic Theory for Allergies, Asthma, and Other Immune Disorders

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REPORT DATE: May 2007

TYPE OF REPORT: Annual

PREPARED FOR: U.S. Army Medical Research and Materiel Command Fort Detrick, Maryland 21702-5012

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Immunologic exposures, infectious exposures, early life exposures, socioeconomic status, population-based, multiethnic, case-control study 16. SECURITY CLASSIFICATION OF: 17. LIMITATION 18. NUMBER 19a. NAME OF RESPONSIBLE PERSONSIBLE PERSONSI

15. SUBJECT TERMS

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Introduction

Breast cancer is the most commonly diagnosed cancer in women worldwide, and incidence and mortality rates have increased substantially over the past 50 years. Reasons for these increases are not entirely clear, because breast cancer causes remain incompletely understood. In the absence of means of primary prevention for breast cancer, partial understanding of its causation compels research into new etiologic hypotheses. Identification of novel hypotheses with promise for detailed etiologic investigation should take into consideration the established features of breast cancer epidemiology. A group of factors meeting these criteria are those mediating reduced or delayed exposure to microbes, especially in childhood. Microbial exposures are thought to influence the development of a robust immune system and have been well studied in the etiologies of allergies, asthma, autoimmune disease and other disorders of immune function. This research has led to the "hygiene hypothesis", the idea that reduced or delayed exposures to important microbial inputs hamper the development of a healthy immune system in early life and the maintenance of such a system in adult life, which in turn increases vulnerability to the development of chronic diseases. This research project aims to flesh out the hygiene hypothesis as it might relate to breast cancer development, thereby assessing its utility for more comprehensive future research. Our research plans are to interview a population-based series of 500 Californian women recently diagnosed with breast cancer and 500 healthy control women as regards age-specific experiences relevant to microbial exposures.

Body

At the end of Year 2, we had accomplished most of the tasks as laid out in our approved Statement of Work. However, we are behind schedule due to delays in navigating through the human subjects protection approval process in Year 1. Below, we provide detail on each task in the Statement of Work and its status.

- Task 1. Develop structured questionnaire, including appropriate questions about microbial exposures for breast cancer by translating concepts from existing hygiene hypothesis literature and incorporating questions from questionnaires from breast cancer studies and a Hodgkin's disease study (months 1-3)
 - a. Compile comprehensive list of topics from hygiene hypothesis literature

We carefully reviewed the hygiene hypothesis literature and compiled a comprehensive list of topics to be included in the questionnaire (Year 1).

b. Obtain language for some questions from Dr. Liu and other authors

We obtained language for some questions from Dr. Liu and other authors, e.g. allergy section of the questionnaire (Year 1).

c. Pilot test for appropriateness for women aged 50 and older

We tested the questionnaire for research question appropriateness for women aged 50 and older. This entailed consideration of cohort-specific experiences in formulating and editing questions (Year 1).

d. Pilot test for variation in concept by ethnicity

We pilot tested the questionnaires among women of white, Asian, and Hispanic ethnicities and incorporated input from them regarding answer choices and terminology. For example, we added different housing types to a question about childhood housing when an Asian woman responded that she grew up in a barracks (Year 1).

e. Pilot test reliability when asked of same person

We have tested reliability when asked of same person by testing slightly revised versions of the questionnaire on the same women, then comparing the answers to see if the answer was comparable.

- Task 2. Finalize study documents, obtain needed approvals and complete other preparations for study commencement (months 4-9)
 - a. Finalize questionnaire and verbal consent scripts

The final questionnaires (Appendix A) and consent form in English (Appendix B) and Spanish (Appendix C) are attached.

b. Translate questionnaire to Spanish

The questionnaire and other relevant study documents were translated into Spanish (Appendix D)

c. Obtain Institutional Review Board approvals

After many months of communications, we received final approvals for this research project from the NCCC Institutional Review Board on 10/19/06 and from the HSRRB on 7/26/06. Both of these approval documents are included in Appendix E.

d. Create study tracking system

In Year 1, we created the study tracking system using Microsoft Access software. The system includes capacity for Computer Assisted Telephone Interviewing (CATI) to improve telephone interviewers' efficiency in data collection. In Year 2, this system was updated to include capacity for Spanish language interviewing and control subject frequency-matching.

e. Hire and train interviewers

In Year 2, we hired and trained 3 interviewers, 2006, one of whom is bilingual in Spanish. However, due to the decline in breast cancer, we laid off one of our interviewers in February 2007 such that 2 interviewers are currently working.

Task 3. Recruit a selection of women recently diagnosed with invasive breast cancer, and age-and race-matched healthy women and interview them about hygiene-hypothesis-relevant exposures as well as established breast cancer risk factors, using study questionnaire (months 9-27)

We originally planned to begin interviewing subjects by month 9 of Year 1 (March 2006). However, it took longer than we anticipated to receive NCCC IRB and HSRRB clearances. Upon completion of the pilot testing and planning process, we made several changes to the statement of work from its original form, include reducing sample size from 1050 women to 1000, modifying the means of control selection from random-digit dialing to an address-based sampling procedure, dropping the life calendar from the subject mailing, and including a saliva specimen retrieval kit with the mailing, as described below. Dr. Carole Christian, our Army Contracting Officer Representative, confirmed via email on 5/30/06 that these changes were not significant enough to warrant a formal change of SOW.

a. Obtain listing of eligible cases from population-based Greater Bay Area Cancer Registry

We obtained all relevant approvals and clearances from the Greater Bay Area Cancer Registry and by the end of Year 2, had received listings of nearly all cases eligible for our study. In light of the unexpected delays in obtaining human subjects approvals as described above, we altered the dates of diagnosis from our original proposal in order to have the greatest chances of contacting and interviewing patients recently diagnosed with breast cancer. Instead of trying to recruit women diagnosed 1/1/2003-7/30/2004, we instead requested listings for women diagnosed between 10/1/2004 and 9/31/2005. To date, we have received listings for 695 breast cancer patients meeting our age and residency requirements.

b. Establish random-digit dialing (RDD) procedures to ascertain control subjects and conduct RDD

After consulting with study collaborators, particularly co-investigator Dr. Pamela Horn-Ross who is experienced in the design and conduct of breast cancer casecontrol studies and RDD, we decided to modify the methodology used to ascertain control subjects using a novel, address-based sampling procedure. This procedure follows many of the principles of traditional RDD but has the additional advantage of allowing for mail, telephone, and personal modes of recruitment. In addition, it provides a known sampling frame, which is no longer possible with RDD. This methodology is described in detail in the study protocol, but is summarized briefly here. We purchased a "saturation list" mailing address list in February 2007 from Marketing Systems Group. The list represents a n=10,000 random sample of all US mail-deliverable addresses for San Mateo, Santa Cruz, San Benito, and Monterey counties. Using mailing lists based on residency offers a way to sample the same general population from which the breast cancer cases occur, a fundamental principle of control selection. Introductory letters containing \$1 cash are mailed to each address selected. These letters request that recipients call a toll-free line or use email to enumerate their household. Women meeting our selection criteria (female sex, aged 50-79, no prior history of breast cancer) will be frequency-matched to cases on five-year age group and race/ethnicity. For households that do not respond to one of the modes within a two-week time frame, we utilize Internet search databases to try and identify a working phone number for the candidate control address. For candidate control addresses for which we can find a phone number (estimated to be 50%), a trained interviewer telephone to enumerate the household. If we are unable to contact the household in this way or with additional mailed requests for contact, depending on budgetary constraints, we may send study staff to the physical address to discuss the study personally.

We initiated control ascertainment in April 2007. To date, we have identified and interviewed 5 eligible control subjects.

c. Mail letters to physicians to ascertain contraindications to contact

We sent letters to physicians prior to contacting all patients (Years 1 and 2).

d. Mail letters of invitation to subjects

We have sent letters of invitation to 695 breast cancer patients and to over 200 potential control households.

e. Telephone subjects to confirm participation

At the time of this report, our interviewers had called 691 breast cancer patients and 200 potential control households to invite eligible women to participate.

f. Mail life calendar and informed consent guide to subjects

We learned from pilot testing the pre-interview that a life calendar substantially slowed the pace of the interview and did not seem to substantially aid subject recall, thus we decided to drop it from the pre-interview packet to be mailed to

subjects. We also decided to include with the informed consent documentation in the pre-interview packet a saliva specimen to be mailed back by each participant.

g. Interview subjects by telephone

At the time of this report, our interviewers had completed interviews with 350 subjects (n=345 cases and n=5 controls) by telephone, with many more women in process of being contacted, searched or scheduled. Regardless, at this time, response rates appear to be considerably lower than we had anticipated. Of n=695 cases identified, we have successfully interviewed 50% (n=345) with about 11% (n=75) cases still in progress. 8% of cases (n=55) were deemed ineligible on the basis of being deceased (n=16), too ill (n=8), not speaking fluent English or Spanish (n=24), comprehension problems/senility (n=5), or doctor disapproval of contact (n=2). However, the numbers of women refusing to participate in the study are higher than we would have anticipated, including 3% using the opt-out box on the initial response form (n=23) and 13% of cases "hard-refusing" (n=93) on telephone contact. An additional 2% of cases (n=13)refused to participate because of their concerns about other DOD-funded nonresearch activities. 95 women who have "soft-refused" or who have not responded to repeated mail and phone contact will be targeted for further requests to participate in upcoming months.

h. Send subjects thank you note and compensation

We send thank you letters along with the compensation at the completion of the interview to all participants. To date we have sent 344 thank you notes and checks/gift cards.

i. Call back subjects to resolve discrepancies

When necessary, interviewers are calling subjects back to resolve discrepancies.

j. Enter and clean data to create analytic database

These activities will occur after subject interviews have been completed.

- Preliminary analyses: Evaluate whether risk of breast cancer diagnosed in women aged 50 years or older is associated with "hygiene hypothesis"-relevant exposures independently of reproductive characteristics and other established BC risk factors (Specific Aim 1) and assess whether associations could be limited to select demographic or tumor groups (Months 28-32)
 - a. Compare distributions of these characteristics between cases and controls

We are still recruiting controls and as such have not yet begun statistical analyses.

- b. Estimate relative risk by calculating odds ratios for suggestively associated risk factors
- c. Adjust these associations for possible confounders

- d. Explore possible effect modification by race/ethnicity and tumor characteristics
- e. Assess selection bias and consider influence on results

Key Research Accomplishments

At the end of Year 2, we had not completed data collection procedures (see above) so we have no key research accomplishments as of yet.

Reportable Outcomes

At the end of Year 2, there were no reportable outcomes resulting from these research activities, including manuscripts, patents, or other scientific products.

Conclusion

As we have yet to complete data collection, we do not have any research findings at this time to summarize and interpret.

References

There are no references at this point.

Appendices

Appendix A – English Questionnaire

Appendix B – English Consent Form

Appendix C – Spanish Consent Form

Appendix D – Spanish Questionnaire

Appendix E – Current NCCC and HSRRB Institutional Review Board approvals

Supporting Data

Not applicable.

PARTICIPANT ID								

NICE

New Ideas in Breast Cancer Etiology RESEARCH STUDY

Interviewer:			
	NAME		CODE
INDEX YEAR:	(for reference of	only)	
DATE OF INTERVIEW:	MONTH/ DA		
START TIME OF INTERVIE	w:	□□ Min	☐ AM ☐ PM
END TIME OF INTERVIEW:	□□ Hr	□□ Min	☐ AM ☐ PM

	TRKG	Edit	DE 1	DE 2	OTHER
DATE					
INITIAL					

Hello, this is	calling from Northern California Cancer Center. I'm calling in regards to the
-	ut the NICE Study. This study is part of an important research to help us understand why
•	ncer and others do not. If you agree to participate, we will ask you to complete a
	cheduled at your convenience, lasting about an hour, and provide us with a saliva sample
	normal variation in your DNA. If you do choose to participate, as a token of our thanks
• •	will mail you your choice of a \$20 check, or a \$20 gift card to Target or Wal-Mart. Are
there any questions I	can answer for you at this point?
Are you willing to port	ainata in this research study?
Are you willing to part	cipate in this research study?
[IF NO1 : Would it be m	nore convenient for me to call you later?
in trodiction	iono convenient for mo to can you later.
[IF YES]: Let's sched	ule a time for the interview and get the study participant kit mailed out to you. You will
need this before the ir	terview is conducted. Is the best address to mail this to you?
At scheduled time for	interview:
l lalla thia ia	colling again from the Newthern Colifornia Concer Conter. It is our coheduled
	calling again from the Northern California Cancer Center. It is our scheduled
	ephone interview for the NICE Study. Did you receive our package in the mail?
[IF YES]: CONTINUE	
HE INUI. PLEASE RES	SCHEDULE INTERVIEW.

First, we have some paperwork to fill out. In your packet should be two copies of a consent form, the violet copy for you to keep and the white copy for you to sign. Hopefully you've had a chance to look over this already, so I will just give you the highlights. What we want to be sure you understand is that...

- Your participation in this study is completely voluntary.
- Your choice to participate or not will have no effect on your medical care.
- You have the right to ask questions at any time, skip any questions you don't want to answer and to end the interview at any time, even if you have not fully completed the interview.
- Lastly, everything that you tell us is confidential. Your name will not be used or made available in any way outside of this study. Any findings from the research study will be presented as group averages. We will take every precaution to protect your privacy.

Do you have any questions for me about participating?

.

At the end of the consent form, there are two questions with places for you to initial your name, can you find that spot? I'm going to read the choices aloud.

Do you agree to participate in the telephone interview? [WAIT FOR YES/NO]. Please initial your choice.

Do you agree to donate a saliva sample and have it stored for research? [WAIT FOR YES/NO]. Please initial your choice.

Could you now sign the form, fold the signed white copy into four and put it in the postage-paid envelope? Do not seal the envelope until after we have collected your saliva sample. Thanks.

[IF SUBJECT AGREED TO DONATE SALIVA SAMPLE]...

Before we start the interview, let's begin with the saliva collection. This should take us about two minutes. Do you have the kit in front of you?

Do you think you need to wash your mouth out with water to get rid of any food particles? [IF **YES**, WAIT FOR SUBJECT TO DO SO.]

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I'm going to read you the instructions. Feel free to interrupt me if you have questions about any steps. When I'm done reading the steps, you can put the phone down and follow the steps while I wait on the line.

- 1. Open the container, and spit your saliva into it.
- 2. Keep spitting until the amount of liquid saliva (not counting foam) reaches the top of the white label with the black mark line. If you have trouble spitting so much saliva, you might find that it is easier to spit more if you put some white sugar on your tongue. We have included a packet of sugar in the kit if you need it.
- 3. Spit until the saliva reaches the top of the white label.

Okay, now go ahead and put the phone down if you want so you can spit into the container.

Does the saliva reach the top of the white label? [**IF YES**] Please tighten the cap very firmly and gently shake the container to mix your saliva with the preservatives inside. Please put the container with your saliva in the plastic hazardous bag, peel the white strip off and seal the bag. Please put the bag in the postage-paid envelope along with the folded consent form, peel the white strip off and seal the envelope. Thank you, we're all done with the collection!

Now onto the interview. This should take us anywhere between 40 and 60 minutes depending on your experiences. As we go along, please remember:

- There are no right or wrong answers. Please try to answer questions as honestly and as accurately as you can.
- Take your time
- Feel free to ask me questions if you don't understand a question
- If there is a question that you don't want to answer, just tell me and I will skip it.
- If you need to take a break, just let me know.

If you do not have other questions, may we begin?

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The first few questions are about your general background.

Q1. What is your date of birth?		
	\rightarrow A. And your a	ge?
Q2. What is your current marital stat	us?	
☐₁ Single, never married ☐₂ Married or living as marri ☐₃ Widowed ☐₄ Separated or Divorced	ied	
Q3. How would you describe your et	hnic background (check all th	at apply)?
☐₁White/Caucasian ☐₄ Chinese ☐₃ Korean ☐97 Pacific Islander ☐98 Other (specify)	☐₂ African-American ☐₅ Japanese ☐₃ South Asian/Indian	☐₃ Hispanic/Latina ☐₅ Filipina ☐₁₀ Vietnamese ☐₃99 Unknown/decline to state
Next we have a few questions abo	out your birth, childhood, fa	mily, and education.
Q4. In what city, state, and country v	vere you born?	
A. City:	_ State:	
B. Country:	(If not born in US, go	to C.)
C. How old were you when you	ou came to this country to live	e permanently? Age
Q5. How many years have you been	living at your current address	s?
Years		
Q6. Were you born by cesarean sec	tion— "c-section"—or naturall	y, that is, vaginally?
□₁ Vaginally □₂ Cesarean (c-section) □₃ DK		
Q7. Was your father born in the Uni	ted States?	
\square 1 Yes \square 2 No \rightarrow A. Wh \square 9 DK	ich country was he born in? _	

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Q8. Was your mother born in the United States?	
\square_1 Yes \square_2 No \longrightarrow A. Which country was she \square_9 DK	born in?
Q9. What is highest grade of school or college your parel school? (IF HOME-SCHOOLED, PROBE FOR NUMBER	
A. Father	B. Mother
Grade school Q ₀ Q ₁ Q ₂ Q ₃ Q ₄ Q ₅ Q ₆ Q ₇ Q ₈	Grade school Q ₀ Q ₁ Q ₂ Q ₃ Q ₄ Q ₅ Q ₆ Q ₇ Q ₈
High school	High school \square_9 \square_{10} \square_{11} \square_{12}
College	College
Graduate work 17-	Graduate work
DK 🔲 99	DK
Q10. Do you have any siblings, including half- or step- whether they are now living or are deceased.	or adopted siblings? Please count all your siblings
□₁ Yes → A. How many? □□	
□₂ No (GO TO Q12)	

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Q11. Now I have some questions about each of these siblings. I'm going to ask about them one by one, starting with the first-born. [IF MORE THAN ONE: Please tell me their first names so that we make sure we're talking about the same person each time. RECORD NAMES THEN GO BACK AND ASK THE QUESTIONS FOR EACH SIB].

	lori oibj.				1	
Sibling	A. Living or	B. Sister or	C. Born in what	D. Full siblings,	E. Did you ever live	F. Ever been
	deceased?	Brother?	year?	Half siblings,	apart for 6 months	diagnosed with
				Step siblings,	or more before	cancer? If yes,
				or adopted	you turned 12?	what kind(s)?
	☐₁ Living	☐₁ Sister		□₁ Full	☐₁ Yes	☐₁ Yes
	2 Deceased	☐₂ Brother	□ ₉ DK	2 Half	□₂ No	\square_2 No
1 st	□ ₉ DK	□ ₉ DK		☐₃ Step	□ ₉ DK	
				4 Adopted		
				□ ₉ DK		□ ₉ DK
	□₁ Living	☐₁ Sister		□₁ Full	☐₁ Yes	☐₁ Yes
	Deceased	☐₂ Brother	□ ₉ DK	2 Half	□₂ No	□₂ No
2 nd	□ ₉ DK	□ ₉ DK		☐₃ Step	□ ₉ DK	
				4 Adopted		
				☐ ₉ DK		□ ₉ DK
	□₁ Living	□₁ Sister		□₁ Full	☐₁ Yes	☐₁ Yes
	2 Deceased	☐₂ Brother	□ ₉ DK	☐₂ Half	□ ₂ No	□ ₂ No
3 rd	□ ₉ DK	□ ₉ DK		□₃ Step	□ ₉ DK	
				☐₄ Adopted		
				□ ₉ DK		□ ₉ DK
	□₁ Living	□₁ Sister		□₁ Full	☐₁ Yes	☐₁ Yes
	2 Deceased	☐₂ Brother	□ ₉ DK	2 Half	□₂ No	□ ₂ No
4 th	□ ₉ DK	□ ₉ DK		☐₃ Step	□ ₉ DK	
				4 Adopted		
				□ ₉ DK		□ ₉ DK
	☐₁ Living	□₁ Sister		□₁ Full	☐₁ Yes	☐₁ Yes
	2 Deceased	☐₂ Brother	☐ ₉ DK	2 Half	□₂ No	□ ₂ No
5 th	□ ₉ DK	□ ₉ DK		☐₃ Step	□ ₉ DK	
				4 Adopted		
				☐ ₉ DK		□ ₉ DK

[INSERT ADDITIONAL PAGES AS NEEDED FOR ADDITIONAL SIBLINGS BEYOND 5TH]

Q12. Before you turned 12, did any other kids that were not your siblings like cousins or foster children, liv with you for at least six months or more?
□₁ Yes → A. How many? □□□
□₂ No a. How old were you when this first happened? □□
b. For how many years did this person live with you? \Box
Q13. Before the age of five, did you go to a daycare? When I say daycare, I mean a childcare with at lea four other children that were not siblings or other children with whom you lived?
☐₁ Yes ☐₂ No ☐₃ DK
Q14. Before the age of five, did you attend a preschool (that is, school before kindergarten)?
☐₁ Yes ☐₂ No ☐₃ DK
Q15. Did you attend kindergarten?
☐₁ Yes ☐₂ No ☐₃ DK
Q16. Before you turned 18, were you ever schooled at home instead of going to school outside your home?
□₁ Yes → A. How many years? □□□ ₂ No
Q17. Before you turned 18, were you ever schooled at a boarding school or other school where you lived in dorm?
□₁ Yes → A. How many years? □□□ □₂ No
Q18. As of today, what is the highest level of schooling you have completed?
Grade school $\bigcirc 0$ $\bigcirc 1$ $\bigcirc 2$ $\bigcirc 3$ $\bigcirc 4$ $\bigcirc 5$ $\bigcirc 6$ $\bigcirc 7$ $\bigcirc 8$ High school $\bigcirc 9$ $\bigcirc 10$ $\bigcirc 11$ $\bigcirc 12$ College $\bigcirc 13$ $\bigcirc 14$ $\bigcirc 15$ $\bigcirc 16$ Graduate work $\bigcirc 17+$

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Next, I'm going to ask you some questions about your home and living environment at different ages of your life.

Q19. Let me ask about age... [READ AGE AND PROCEED WITH QUESTIONS WORKING DOWN

COLUMNS

COLUMNS]	1	_	_	1	ı
	Age	Age	Age	Age	Reference
	6 months	5 yrs	12 yrs	30 yrs	Year
A. Did you live in a rented house or	☐ Yes	☐ Yes	☐ Yes	☐ Yes	Yes
apartment?	☐ No	☐ No	☐ No	☐ No	☐ No
	☐ DK	☐ DK	☐ DK	☐ DK	☐ DK
B.Which of the following best describes the	☐ Farm	☐ Farm	☐ Farm	☐ Farm	☐ Farm
area you lived in at the time: farm, other	Rural	Rural	Rural	Rural	Rural
rural, small town, suburban, or urban/city?	☐ Town	☐ Town	☐ Town	☐ Town	☐ Town
	☐ Suburb	☐ Suburb	☐ Suburb	☐ Suburb	☐ Suburb
	Urban	Urban	Urban	Urban	Urban
	☐ DK	☐ DK	☐ DK	☐ DK	☐ DK
C. Did your home have indoor plumbing	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes
and running water?	☐ No	☐ No	☐ No	☐ No	☐ No
	☐ DK	☐ DK	☐ DK	☐ DK	☐ DK
D. On a scale of 1-5, 1 being lowest and 5					
highest, rank your household's general					
financial situation	☐ DK	☐ DK	☐ DK	☐ DK	☐ DK
E. Think about the rooms of the home you lived					
in. How many siblings or other people usually					
slept in the same bedroom as you?	☐ DK	☐ DK	☐ DK	☐ DK	☐ DK
F. Did you have any cats living in the home on a	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes
regular basis?	□ No	□ No	□ No	□ No	☐ No
	☐ DK	☐ DK	☐ DK	☐ DK	☐ DK
G. Did you have any dogs living in the home on	☐ Yes	☐ Yes	☐ Yes	☐ Yes	☐ Yes
a regular basis?	☐ No	☐ No	☐ No	☐ No	☐ No
	☐ DK	☐ DK	☐ DK	☐ DK	☐ DK
H. Did you have any other furry pets like rabbits		□ Yes	□ Yes	□ Yes	☐ Yes
guinea pigs, or hamsters living in the home on	U No	U No	U No □ DI	☐ No	U No □ DI
a regular basis?	□ DK	□ DK	□ DK	☐ DK	□ DK
I. Did you live within a half-mile of stables or	Yes	Yes	Yes	Yes	Yes
pens where horses, cows, pigs or other	☐ No	☐ No	☐ No	☐ No	☐ No
hoofed animals were kept?	□ DK	□ DK	□ DK	□ DK	□ DK

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Q20. At age 12, about 6th or 7th grade, were you taller than, the same as, or shorter than MOST other girls your age? □₁ Taller ☐₂ The same □₃ Shorter □₉ DK Q21. At age 12, compared to most other girls your age and height, was your weight average, below average, or above average? □ Below average for your age and height □₂ About average for your age and height □₃ Above average for your age and height □₉ DK Q22. Now let's talk about more recent years. In [REFERENCE YEAR], how tall were you? feet inches Q23. In [REFERENCE YEAR], how much did you weigh? pounds Next I have a couple of questions about your levels of physical activity, thinking about your entire lifetime. Q24. In general, over your lifetime, did most of your jobs or household responsibilities require you to be... ☐₁ Mostly sedentary □₂ Lightly active □₃ Moderately active □₄ Highly active □₉ DK Q25. In general, over your lifetime, would you describe your leisure time level of physical activity to be... □₁ Mostly sedentary □₂ Lightly active □₃ Moderately active □₄ Highly active

The next questions are about your height and weight at different times of your life.

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□₉ DK

Q26. How old were you when had your first menstrual period/monthly cycle? Age \square Q27. How many times have you been pregnant? Please include pregnancies ending in stillbirth, miscarriage, abortion, ectopic or tubal pregnancies, or any current pregnancy. (Number of pregnancies) Q28. Was there ever a time that you tried to become pregnant for at least 1 year and could not? □₁ Yes A. Did you ever take any prescription fertility drugs (like clomid or danazol) to try Q₂ No and become pregnant? □₉ DK □₁ Yes \rightarrow a. How old were you when you first did this? \square_2 No □₉ DK

Next we have some questions for you about your menstrual periods and pregnancies.

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	Single Live Birth	☐₁ Continue to question A.
	Multiple birth	□₂ Were all of the babies born alive? □₁ Yes □₂ No
	Miscarriage (after 20 wks)	□₃ Continue to next pregnancy.
	Miscarriage (before 20 wks)	Continue to next pregnancy.
	Induced Abortion	□₅ Continue to next pregnancy.
	Ectopic or Tubal	Continue to next pregnancy.
	Currently pregnant	☐ ₇ When is the baby due? Skip to Q31
	Other (specify):	☐ See Continue to question A if applicable.
	☐ Vaginally ☐ Cesarean (c-section) ☐ DK What was the sex of the baby (l	arean section— "c-section"—or naturally, that is, vaginally? pabies)?
	☐₁ Vaginally ☐₂ Cesarean (c-section) ☐₃ DK	
B. V	□₁ Vaginally □₂ Cesarean (c-section) □₃ DK What was the sex of the baby (I □₁ Female □₂ Male □₃ Both (multiple birth)	
B. V	□¹ Vaginally □² Cesarean (c-section) □³ DK What was the sex of the baby (land) □¹ Female □² Male □³ Both (multiple birth) Did you breast-feed the baby (b	pabies)?
B. V	□¹ Vaginally □² Cesarean (c-section) □³ DK What was the sex of the baby (I □¹ Female □² Male □³ Both (multiple birth) Did you breast-feed the baby (b	pabies)? abies) for at least two weeks or longer? w old was the baby (babies) when you stopped breastfeeding?
B. V	□¹ Vaginally □² Cesarean (c-section) □³ DK What was the sex of the baby (I □¹ Female □² Male □³ Both (multiple birth) Did you breast-feed the baby (b	pabies)? abies) for at least two weeks or longer? w old was the baby (babies) when you stopped breastfeeding?

The next questions are about your 1st pregnancy.

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life.	
Q31. Did you ever adopt	any children?
\square_1 Yes \rightarrow \square_2 No	A. How many?
	B. How old was the child when the child first came to live with you?
	□□□□□₁ Days □₂ Months □₃ Years
	C. After this time, but before the child turned 12 years old, were there any periods of time greater than 6 months that your child did not live with you?
	□₁Yes → a. Describe
Q32. Do you have any gr	andchildren?
□₁ Yes → □₂ No	A. How many?
— 2110	B. Did you ever live with any of them for at least one year while they were age 12 or younger?
	 □ 1 Yes → a. How old were you when this first occurred? □ 1 No
Q33. Did you ever raise stepchild?	any other children who were not your biological or adopted children, like a niece or
□₁ Yes →	A. How many?
□₂ No	B. How old was the child when the child first came to live with you? \Box
	C. After this time, but before child turned 12 years old, were there any periods of time greater than 6 months that your child did not live with you?
	□₁Yes → a. Describe
Q34. Have you ever work	ed as a teacher or professional childcare provider for at least one year?
☐₁ Yes →	A. Did you ever work with children under age 5?
☐ ₂ No	□₁ Yes → a. Please describe job

Now, I wanted to ask about any other children that you might have spent a lot of time with in your adult

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Next, I have a few questions about some other aspects of your reproductive health. First, I want to ask you about any female hormones that you may have used. I'm going to ask you first about birth control pills and then about hormone replacement therapy.

Q35.	Have you eve	r taken t	birth control pills, also called oral contraceptives or "the pill" for a month or more?
	☐₁ Yes	\rightarrow	A. At what age did you start taking them?
	\square_2 No		B. How old were you when you last took them?
			C. During this time, was there a period when you stopped taking the pill for any reason, for example to get pregnant?
			☐₁ Yes → a. Between the ages of and, for how
			☐₂ No many months or years did you not take the pill?
			☐ ☐ ☐ 1 Months
			☐ ₂ Years
Q36.	Have you eve	r used p	rescription hormone therapy for menopausal symptoms for a month or more?
	□₁ Yes	\rightarrow	A. Have you used them within the last three months?
	\square_2 No		☐₁ Yes
			□ ₂ No
			B. How old were you when you began taking it?
			L years
			C. How old were you the last time you took it? years
			D. Did you ever temporarily stop taking it?
			☐₁ Yes → a. Between the ages of and, for how
			□₂ No many months or years did you not use hormone therapy?
			□ □ □ 1 Months
			2 Years
			E. Had your periods stopped for at least six months before you started taking hormone therapy?
			☐₁ Yes → a. At what age did they stop?
			□ ₂ No
			F. Which type of hormone therapy did you most commonly use?
			Combined estrogen and progestin (Prempro, Premphase, FemHRT, Estratest)
			□₂ Estrogen only pills (Premarin, Estrace, Ogen)
			□₃ Estrogen cream or patch
			(GO TO Q38)

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Q37.	Are you still havin	g regular m	enstrual periods?
	□₁ Yes	(GO TO Q3	9)
	☐ ₂ No	\rightarrow	A. How old were you when you had your last period?
			B. Did your periods stop by themselves, or because of surgery or a medical intervention (like chemotherapy)?
			☐₁ Naturally ☐₂ Surgery/medical
Q38.	Have you ever ha	d a hystere	ctomy, that is, had your uterus removed?
	☐₁ Yes ☐₂ No	→	A. How old were you then?
Q39.	Have you ever ha	d an oopho	rectomy, that is, have one or both of your ovaries removed?
	☐₁ Yes ☐₂ No	→	A. Did you have one or both ovaries removed? ☐₁One ☐₂ Both
			B. How old were you then?
	I have a few ERENCE YEAR.]	questions	about your medical care between [REFERENCE YEAR -5] and
Q40.	During this time, w	ere you cov	vered by health insurance?
	☐₁ Yes, covered ☐₃ Yes, covered ☐₂ No		ime not all of the time
Q41.	How many mamm	ograms did	you have during this five year period?
Q42.	How many pap sm	nears did yo	u have during this five year period?

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Next I have a few questions about you and your family's cancer background.

Q43. Have you ever	been d	agnosed with cancer?
□₁ Yes □₂ No	→	A. What kind of cancer(s) did you have? Please be as specific as possible
		B. How old were you the first time you were diagnosed with cancer?
		C. What kinds of treatment did you receive after your first diagnosis (Check all that applies.)
		□₁ Surgery □₂ Radiation □₃ Chemotherapy □₄ Immune therapies (like Herceptin or Rituxan) □₃ DK
		D. Have you had any kind of recurrence since your first diagnosis?
		□₁ Yes □₂ No
Q44. Have you ever	had a b	reast biopsy that showed that you had benign breast disease?
□₁ Yes □₂ No □₃ DK	→	A. How old were you the first time you had a biopsy for benign breast disease?
Q45. Has your father	er ever b	een diagnosed with cancer?
□₁ Yes □₂ No □₃ DK	→	A. What type(s) of cancer did he have? a. How old was he when he was first diagnosed? □□□
Q46. Has your moth	ier ever	peen diagnosed with cancer?
□₁ Yes □₂ No □₃ DK	\rightarrow	A. What type(s) of cancer did she have? a. How old was she when she was first diagnosed?

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Next I have some questions about other aspects of your medical history. Has a doctor ever told you that you had...

Q47.				Age <u>first</u> diagnosed
A. Infection with parasites like pinworms, malaria or schistosomiasis	□₁ Yes↓ a. If YES,	☐ ₂ No	□ ₉ DK	Age 🔲 🔲
B. Chicken pox	□₁ Yes	□ ₂ No	□ ₉ DK	Age 🔲 🔲
C. Measles, the kind that lasts about 10 days	□₁Yes	Q ₂ No	□ ₉ DK	Age
D. Infectious mononucleosis, also called "mono" or "kissing disease"	□ ₁ Yes	□₂ No	Ū₅DK	Age 🔲 🔲
E. Varicella zoster or shingles		-	□ ₉ DK ERENCE DA ⁻ ave you had?	
F. Mastitis (a breast infection)	□₁ Yes↓ a. If YES, onursing?	□₂ No did you have □₁ Yes	□ ₉ DK e it while □ ₂ No	Age 🔲 🔲
G. Chlamydia	□₁ Yes	□ ₂ No	□ ₉ DK	Age 🔲 🔲
H. Urinary tract infections, more than 5 times in your life	□₁Yes	□ ₂ No	□₃DK	Age \square
I. Yeast infections, more than 5 times in your life	□₁Yes	□ ₂ No	□₅DK	Age 🔲 🔲
J. Herpes in your genital area	□₁Yes	□ ₂ No	□₃DK	Age 🔲 🔲
K. An ulcer caused by helicobacter pylori, a bacteria that lives in your stomach		☐₂ No How many ti ed for this uld	□₀DK mes have you cer?	Age
L. Lyme disease that is carried by deer ticks	□₁Yes	□₂ No	□∘DK	Age \square
M. Diabetes, the kind requiring insulin	□₁Yes	☐ ₂ No	□ ₉ DK	Age 🔲 🔲
N. Gum disease, such that you had to get surgery		□₂ No now many tir	□₃DK mes have you	Age 🔲 🔲

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sympto swellin animal	oms: runny nos g, or anaphyla	e, wate	ry e ck. I	questions about allergies. By allergies, we mean having any of the following yes, sneezing or congestion, wheezing or asthma, hives or rash, severe 'm going to read you a list of things which people can be allergic to: dust, oods, insect stings, molds or medications? Have you ever been allergic to any
	\square_1 Yes \square_2 No \rightarrow (GC	O TO Q	57)	
Q49. H	ave you ever h	nad an a	aller	gic reaction to house dust?
	☐₁ Yes ☐₂ No	→		What allergic reaction did you have? (Check all that applies) Running nose Burning/watery eyes Sneezing/congestion Wheezing/asthma Shives/rash Severe swelling Anaphylactic shock
			B.	At what age did you first notice this allergy?
			C.	At what age did you last have an allergic reaction to house dust?
Q50. H	ave you ever h	nad an a	aller	gic reaction to any of the following animals: (check all that applies)
	☐ 1 Dogs ☐ 2 Cats ☐ 3 Horses ☐ 4 Mice, rats	, or guir	nea	pigs
	☐₁ Yes ☐₂ No	\Rightarrow	B. C.	What allergic reaction did you have? (Check all that applies) \[\begin{align*} \text{Running nose} \\ \text{\text{\text{2}} Burning/watery eyes} \\ \text{\text{\text{3}}} Sneezing/congestion} \\ \text{\text{\text{4}}} Wheezing/asthma} \\ \text{\text{\text{6}}} Severe swelling} \\ \text{\text{\text{6}}} Severe swelling} \\ \text{\text{\text{7}}} Anaphylactic shock} \] At what age did you first notice this allergy? \[\text{\text{Check all that applies}} \] How many total years have an allergic reaction to [animal]? \[\text{\text{Check all that applies}} \] How many total years have you lived with or worked in the immediate presence of [animal]? \[\text{\text{Check all that applies}} \]

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$\square_1 \text{ Yes} \rightarrow \square_2 \text{ No}$	A. What allergic reaction did you have? (Check all that applies)
	□¹ Running nose □² Burning/watery eyes □³ Sneezing/congestion □⁴ Wheezing/asthma □⁵ Hives/rash □⁶ Severe swelling □² Anaphylactic shock
	B. At what age did you first notice this allergy?
	C. At what age did you last have an allergic reaction to trees, grass, weeds, or pollen?
	D. About how many months out of the year are (were) you affected by this allergy given a typical year? month(s)
Q52. Have you ever had an a	llergic reaction to foods such as: (check all that apply)
□₁ Eggs □₂ Dairy products □₃ Fish (not shellfish) □₄ Shellfish □₅ Wheat □₆ Peanuts □₁ Soy □₃ Other (Specify)	
\square_1 Yes \rightarrow \square_2 No	A. What allergic reaction did you have? (Check all that applies)
	□¹ Running nose □² Burning/watery eyes □³ Sneezing/congestion □⁴ Wheezing/asthma □⁵ Hives/rash □⁶ Severe swelling □² Anaphylactic shock B. At what age did you first have an allergic reaction to food?

Q51. Have you ever been allergic to trees, grass, weeds, or pollen?

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	C. At what age did you last have an allergic reaction to food?
	D. About how many total times have you had an allergic reaction to foods? I number of reactions
Q53. Have you ever had an	allergic reaction to bee, yellow jacket, hornet or wasp stings?
□₁ Yes → □₂ No	A. What allergic reaction did you have? (Check all that applies)
	□¹ Running nose □² Burning/watery eyes □³ Sneezing/congestion □⁴ Wheezing/asthma □⁵ Hives/rash □⁶ Severe swelling □७ Anaphylactic shock B. At what age did you first notice this allergy? □□ C. At what age did you last have an allergic reaction to (insects) stings? □□□ D. How many allergic reactions to (insect) stings would you estimate you have had in your life time? □□□ stings
Q54. Have you ever had an	allergic reaction to molds?
□₁ Yes → □₂ No	A. What allergic reaction did you have? (Check all that applies) \[\begin{align*} \text{Running nose} \\ \text{2 Burning/watery eyes} \\ \text{3 Sneezing/congestion} \\ \text{4 Wheezing/asthma} \\ \text{5 Hives/rash} \\ \text{6 Severe swelling} \\ \text{7 Anaphylactic shock} \\ \text{B. At what age did you first notice this allergy?} \text{1} \\ \text{C. At what age did you last have an allergic reaction to molds?} \text{1} \\ \text{D. In a typical year, how many months were you affected by your allergy to molds?} \text{1} \\ \text{1} \text{1} \text{1} \text{2} \text{2} \text{3} \\ \text{2} \text{3} \text{3} \text{3} \text{3} \\ \text{3} \text{3} \text{3} \text{4} \text{4} \text{4} \text{4} \text{4} \text{4} \text{4} \text{5} \text{4} \text{5} \text{4} \text{5} \text{6} \text{5} \text{6} \text{7} \text{6} \text{7} \\ \text{5} \text{6} \text{7} \text{7} \text{8} \text{7} \text{8} \text{9} \text{9} \text{1} \text{8} \text{1} \text{8} \text{1} \text{1} \text{1} \text{1} \text{2} \text{1} \text{2} \text{3} \text{4} \text{3}

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	□₁ Yes □₂ No	A. Which type(s):
	■2 INO	B. What allergic reaction did you have? (Check all that applies) \[\begin{align*} \Pi \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	many	total times have you had an allergic reaction to this medication? I number of reactions
Q55.	Before [REFE	RENCE YEAR], did you ever receive <u>allergy</u> shots either weekly or monthly?
	☐ ₁ Yes ☐ ₂ No	 A. At what age did you first get them? B. At what age did you last get allergy shots? C. Altogether, how many months or years did you get allergy shots? ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
Q56.	Before [REFE	RENCE YEAR], did you ever take antihistamines to treat allergy symptoms?
	☐₁ Yes ☐₂ No	 → A. During how many of the past 20 years did you take antihistamines occasionally or regularly to ease allergy symptoms? ☐☐ Years a. And during those [#] years, about how many months per year did you take antihistamines (for your allergies)? ☐☐ Months
Q57.	Have you ever	had your tonsils removed?
	☐₁ Yes ☐₂ No	→ A. At what age were they removed? □□
Q58.	Have you ever	had your appendix removed?
	□₁ Yes □₂ No	→ A. At what age was it removed? □□□

Q54A. Have you ever had an allergic reaction to any medication(s)?

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Q59.	59. Have you ever had your spleen removed? (splenectomy)							
	□₁ Yes □₂ No	A. At what age was it removed?						
	□ 2 NO		B. Why was your spleen removed (for what disease or condition)?					
Q60.	Between [REF	ERENC	E YEAR-5] and [REFERENCE YEAR], did you ever take antibiotics?					
	☐₁ Yes ☐₂ No ☐₃ DK	→	A. On how many occasions during these 5 years did you take a full course of antibiotics? occasions					

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Lastly, I have a few questions about some other aspects of your health and lifestyle. The first few questions ask about your consumption of alcohol at different times in your life.

Q61. On average, at age [READ AGE BELOW HERE]. how many drinks OF [READ ALCOHOL TYPE] did you have per week? [ENTER AMOUNT. IF LESS THAN 2 DRINKS/MONTH, ENTER 0]. On average, how many days out of the week did you have at least 1 drink? Keep in mind that 1 drink is a 1 bottle, can, or glass of beer, 1 glass of wine, champagne or wine cooler, or 1 cocktail, shot, or mixed drink of liquor.

		Age 18-22		Age	30-35	Ref Age		
		Drinks/week	Days/week	Drinks/week	Days/week	Drinks/week	Days/week	
	Beer							
	White wine, champagne							
	Red wine							
	Cocktails, liquor							
Q62.	Have you ever smoked	l at least one	cigarette pe	er day for 3 o	consecutive	months or lo	nger?	ı
	_			,			· ·	
	□₁ Yes□₂ No (GO TO Q67)							
Q63.	How old were you wher	n you first sta	arted smokin	g that amou	nt?			
Q64.	When you smoked, how	v many cigar	ettes did you	u smoke per	day, on ave	rage?		
	per day							
Q65. month	Are you currently smo s?	king, that is,	, have you s	smoked at le	east one cig	arette per d	ay for the la	ıst three
	□₁ Yes							
	\square_2 No \rightarrow	A. How old	were you wh	nen you stop	ped smokino	g permanent	ly?	
Q66.	How many total years d	lid you smok	e cigarettes,	not includin	g any time v	vhen you sto	pped tempo	rarily?
	□□ years							
Q67. cance	Have you ever had rad	diation treatr	ment to your	r chest area	not includi	ng radiation	treatment fo	r breas
	□₁ Yes → □₂ No	A. For what	kind of cond	dition?				

□₉ DK

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eat th	e following kinds of foods:
Q68.	Yogurt (not the frozen kind)?
	days/month
Q69.	Kim chee or sauerkraut (fermented cabbage)
	□□ days/month
Q70.	Lactobacillus or probiotic supplements
	□ □ days/month
Q71.	Finally, in your lifetime how many times have you been stung by bees or wasps?
	□ □ times

Between [REFERENCE YEAR-2] and [REFERENCE YEAR], on average, how many days per month did you

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That completes the interview. Thank you very much for participating in our study, we greatly appreciate your time and effort. END. [TO BE FILLED OUT BY INTERVIEWER AFTER INTERVIEW IS COMPLETE]. Did the respondent seem to find the interview too long? □₁ Yes \square_2 No Would you consider the respondent's information: □₁ Reliable \square_2 Doubtful **□**₃ Unreliable Please provide any comments here about the respondent's reliability.

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NICE

(New Ideas in breast Cancer Etiology) Research Study

PARTICIPANT CONSENT FORM

PURPOSE: You are invited to participate in a research study being conducted by the Northern California Cancer Center (NCCC), located in Fremont, California, and sponsored by the U.S. Department of Defense. The results from this study will be used to help answer some important scientific questions that may help to identify new causes of breast cancer. A total of 1,000 women ages 50-79 years and who live in San Mateo, San Benito, Santa Cruz and Monterey counties, some with breast cancer, others without, will be participating.

PROCEDURE: Each participant will be asked to do the following:

- 1) Participate in one telephone interview about your family and background (lasting about an hour)
- 2) Follow the interviewer's instructions to donate a saliva sample and mail it back to us in a postage-paid envelope.

DISCOMFORTS AND RISKS TO BE EXPECTED: Although there are no precautions for participation, some questions in the telephone interview may be sensitive and you have the right to refuse to answer any question if you wish to do so. Providing us with a saliva sample by spitting into a cup should pose minimal physical risk to you.

BENEFITS: You will not receive any direct health benefits from participating in this study. There are no costs to you for participating. It is our hope that knowledge gained from this study will lead to a better understanding of the causes of breast cancer and to its prevention in future generations. We also hope you will gain sense of satisfaction for contributing to this research. To learn more about research at NCCC, please visit http://www.nccc.org/research.html.

OPPORTUNITY TO WITHDRAW/ALTERNATIVES: Your participation is entirely voluntary. If you enroll in the study, you will always have the right to withdraw at any time, to decline to answer any particular question, and/or to not provide a saliva sample. You can withdraw from the study at any time by telling the interviewer or by calling 866-882-NICE (6423). Your decisions will in no way affect the health care you receive now or in the future. The only alternative to participating in this research study is not to participate.

CONFIDENTIALITY: All information obtained in this study will be kept confidential in accordance with applicable laws. Your information and saliva sample will be assigned a study number. Your name will never appear on the questionnaires, specimens, or in any report and will not be released to anyone outside of the NICE research study. However, representatives of the NCCC Institutional Review Board and the funding agency (U.S. Army Medical Research and Materiel Command) are eligible to review research records as needed to ensure the protection of study participants.

USE OF SALIVA: Your saliva sample will be used as a source of your DNA, which will

eventually be tested for genetic variations. This information will only be used for research purposes. Individual results of genetic studies will not be shared with you or anyone outside the NICE study. A signed release form must accompany each sample, so that you are donating it freely and relinquishing any right, title, or interest of the participant to the sample.

FUTURE RESEARCH: In the future, other substances or genes may be discovered that may affect women's health. DNA samples derived from your saliva will be stored in locked freezers for future use to test for such genes and other substances. In the event these samples are used in future research, you will not be contacted for permission to use your sample. Any samples you have donated which are used in future research studies could potentially have some commercial applicability. The Northern California Cancer Center has no plans to compensate you if a product of commercial value is developed.

COMPENSATION: You will receive either a \$20 check or gift card for successfully completing the study. This will be mailed to you within 2-4 weeks after we receive your saliva sample in the mail. If you decide not to donate a saliva sample, you will still receive the compensation.

WHO TO CONTACT: For any questions concerning this study or if you are not satisfied with the manner in which this study is being conducted we encourage you to contact the Research Director, Dr. Christina Clarke by phone at (510) 608-5000, by email at tina@nccc.org, or by mail at the Northern California Cancer Center, 2201 Walnut Ave. Suite 300, Fremont, CA 94538. Or you may report (without giving your name if you choose) any complaints to the Institutional Review Board by calling Dr. Robert McLaughlin, IRB Administrator at (510) 608-5000 or by addressing a letter to the Institutional Review Board, Northern California Cancer Center, 2201 Walnut Ave. Suite 300, Fremont, CA 94538. Please report any research-related injuries to Dr. McLaughlin. We are happy to provide you final study reports, when they are completed, at your request to Dr. Clarke.

CALIFORNIA STATE LAW REQUIRES THAT WE INFORM YOU ABOUT:

- 1. The nature and purpose of the study.
- 2. The procedures in the study.
- 3. Discomforts and risks to be expected from the study.
- 4. Benefits to be expected from the study.
- 5. The opportunity to ask questions about the study or the procedures.
- 6. The opportunity to withdraw at anytime without affecting your future medical care.
- 7. A copy of the consent form for the study.
- 8. The opportunity to consent freely to the study without pressure.

Please initial the study components in which you agree to participate:

I agree to participate in the telephone interview _______ YES ______ NO

I agree to donate a saliva sample and have it used in ongoing and future research. ______ YES ______ NO

By signing below, you indicate that you have read this form, received acceptable answers to your questions, and have agreed to participate in the study, as indicated above.

Signature of participant Printed Name ______ Date



NICE

(del inglés Nuevas Ideas en la Etiología del Cáncer Mamario) Estudio de Investigación

FORMULARIO DE PERMISO DEL PARTICIPANTE

OBJETIVO: Usted ha sido invitado a participar en un estudio de investigación dirigido por el Centro del Cáncer del Norte de California (NCCC), ubicado en Fremont, California. Los resultados de este estudio serán empleados como apoyo para responder algunas importantes preguntas científicas que pudieran ayudar a identificar nuevas causas del cáncer mamario. Un total de 1000 mujeres entre 50 y 79 años, con o sin cáncer mamario, han sido invitadas a participar en los condados de San Mateo, San Benito, Santa Cruz y Monterrey.

DESARROLLO: A cada participante se le pedirá hacer lo siguiente:

- 1) Participar en una entrevista telefónica acerca de sus antecedentes y su familia (duración aproximada de 1 hora)
- 2) Donar una muestra de saliva siguiendo las instrucciones del encuestador, y enviarla en un sobre pre-pagado, sin costo alguno para usted.

RIESGOS E INCONVENIENCIAS ESPERADAS: Aunque no hay ninguna precaución para participar, algunas de las preguntas en la entrevista telefónica pudiesen ser confidenciales y usted tiene el derecho, si lo desea, a negar contestar cualquier pregunta. El escupir en un recipiente para proveernos con una muestra de saliva, le debiera representar un mínimo riesgo físico.

BENEFICIOS: Usted no recibirá ningún beneficio directo de salud por participar en este estudio. No hay costo alguno para usted si participa. Esperamos que este estudio nos permita ganar más conocimiento acerca de las causas del cáncer mamario y su prevención en futuras generaciones. También esperamos que usted se sienta satisfecha por contribuir con esta investigación. Para aprender más de las investigaciones realizadas en NCCC, por favor visite http://www.nccc.org/research.html.

OPORTUNIDAD DE RENUNCIAR/ALTERNATIVAS: Su participación es totalmente voluntaria. Si desea inscribirse en el estudio, siempre tendrá el derecho a retirarse cuando quiera, negarse a contestar cualquier pregunta en particular, y/o no colaborar con la muestra de saliva. En el presente o futuro, su plan de salud no será afectado en ninguna forma por su decisión. La única alternativa de estar participando en este estudio es no participar.

CONFIDENCIALIDAD: Toda la información obtenida en este estudio será reservada confidencialmente de acuerdo a las leyes vigentes. A su muestra de saliva e información personal se le asignará un número. Su nombre nunca aparecerá en ningún cuestionario, ejemplar o reporte y no será entregado a nadie fuera del estudio de investigación NICE. Sin embargo, para proteger los participantes del estudio, la Mesa de Representantes de la Revisión Institucional del NCCC (Investigación y Comando Material de la Armada de los Estados Unidos) está autorizada para revisar los datos de la investigación según sea necesario.

USO DE LA SALIVA: Su muestra de saliva será utilizada como una fuente de ADN, la cual será eventualmente sometida a pruebas de variaciones genéticas. Esta información será únicamente usada con fines de investigación. Los resultados individuales de estudios genéticos no serán

Appendix C

compartidos con usted o nadie fuera del estudio NICE. Cada muestra debe ser adjunta con un formulario de permiso firmado, indicando que usted está donándola gratuitamente y renunciando a cualquier derecho, título o interés en la muestra.

INVESTIGACIÓN A FUTURO: En el futuro, se descubrirán otros genes o substancias que afectan la salud de la mujer. Las muestras de ADN obtenidas de su saliva serán almacenadas en congeladores clausurados para uso de futuras investigaciones, y usted no será contactada para autorizar su utilización. Cualquiera de las muestras que usted ha donado para futuros estudios de investigación, podrán tener potencialmente aplicabilidad comercial. Si se desarrolla un producto de valor comercial, el Centro del Cáncer del Norte de California no le ofrece ningún plan de compensación.

COMPENSACIÓN: Tras completar exitosamente este estudio, usted recibirá un cheque o tarjeta de regalo de \$20. Éste le será enviado dentro de 2-4 semanas después de recibir su muestra de saliva por correo. Usted será igualmente compensado, aunque decida no donar una muestra de saliva.

A QUIÉN CONTACTAR: Si usted no está satisfecho con la forma en que este estudio fue dirigido o tiene cualquier pregunta referente a este estudio, le agradeceríamos que contactara a la Directora de la Investigación, Dr. Christina Clarke, teléfono (510) 608-5000, dirección electrónica tina@nccc.org, o dirección Northern California Cancer Center, 2201 Walnut Ave. Suite 300, Fremont, CA 94538. Usted también puede reportar cualquier reclamo (anónimamente, si lo desea) contactándose con Rob McLaughlin, Administrador del IRB (Institutional Review Board), teléfono (510) 608-5000 o dirección Institutional Review Board, Northern California Cancer Center, 2201 Walnut Ave. Suite 300, Fremont, CA 94538. Cuando los reportes del estudio estén finalizados, puede solicitarlos a la Dr. Clarke.

EL ESTADO DE CALIFORNIA REQUIERE QUE LE INFORMEMOS ACERCA DE:

- 1. Objetivo y naturaleza del estudio
- 2. Los procedimientos en el estudio
- 3. Riesgos e inconvenientes esperados del estudio
- 4. Beneficios esperados del estudio
- 5. La oportunidad de realizar preguntas acerca del estudio o de los procedimientos.
- 6. La alternativa de renunciar en cualquier momento sin afectar su futuro cuidado médico.
- 7. Una copia del formulario de permiso para el estudio.
- 8. La oportunidad de aceptar libremente, sin presiones, participar en el estudio.

Firma del Participante	Nombre Impreso	 Fecha	
Al firmar a continuación, ustec	' l está indicando que ha leído es y ha estado de acuerdo en p	te formulario, ha rec	ibido respuestas
Deseo donar una muestra de s presente o futura investigación	•	SI	NO
Deseo participar en la entrevis	sta telefónica	SI	NO
Por favor, ponga sus iniciales	en las componentes del estudio	en las cuales desea	participar:

N°	PA	RTIC	IPA	NTE
	П		П	П

NICE

Nuevas Ideas en la Etiología del Cáncer Mamario ESTUDIO DE INVESTIGACIÓN

Entrevistador:]
Nombre		Código	
ÍNDICE ANUAL:	mo referencia)		
FECHA DE LA ENTREVISTA: D/MES /	DÍA / AÑO		
TIEMPO DE INICIO DE LA ENTREVISTA:	□□ HR	□□ Min	☐ AM ☐ PM
TIEMPO DE FINALIZACIÓN DE LA ENTRE	EVISTA: HR	□□ Min	☐ AM ☐ PM

	TRKG	Edit	De 1	DE 2	OTHER
DATE					
INITIAL					

llamándola en referencia a la importante investigación que otras no. Si usted accede aproximadamente una hora, modo que podamos ver v participación, le enviaremos	y estoy llamando desde el Centro de Cáncer del Norte de California. Estoy a carta que le enviamos acerca del Estudio NICE. Este estudio forma parte de una sirve como apoyo para entender por qué algunas mujeres contraen cáncer mientras a participar, necesitaremos que usted complete una entrevista telefónica de concertada de acuerdo a su conveniencia, nos entregue una muestra de saliva de ariación normal de su ADN. Como muestra de nuestro agradecimiento por su según usted prefiera, un cheque por \$20, o una tarjeta de regalo de Target o Walay alguna pregunta que pueda responderle?
Esta usted dispuesta a partic	ipar en el estudio de investigación?
[EN CASO QUE NO] : ¿Seria	mejor para usted si la llamamos después?
	mos en una fecha para la entrevista y para enviarle el paquete del participante del lo eso antes de llevar a cabo la entrevista. ¿Es
la mejor dirección para envia	rle este paquete?
Al momento de la entrevista:	
California. La entrevista tele nuestro paquete? [EN CASO SI]: CONTINUAF	y estoy llamándola nuevamente desde el Centro de Cáncer del Norte de fónica para el estudio NICE fue concertada para hoy. ¿Recibió usted por correo

Primero, debemos llenar unos documentos. Dentro del paquete debería estar dos copias del formulario de consentimiento para firmar. Esperamos que usted ya haya tenido la oportunidad de revisar esto, de esta forma, yo le indicaré sólo lo más importante a saber. Queremos estar seguros(as) que usted entiende que...

- Su participación en este estudio es completamente voluntaria.
- Aun que usted participe o no, no tendrá ningún efecto en su cuidado médico.
- Desde ahora en adelante, usted tiene el derecho hacer preguntas, a evadir cualquier pregunta que no desea contestar y terminar la entrevista en cualquier minuto, aunque usted no haya completado la entrevista.
- Por ultimo, todo lo que usted nos diga es confidencial. Su nombre no será usado y/o no estará disponible fuera de este estudio. Los resultados de este estudio serán presentados como promedios grupales. Tomaremos todas las precauciones para proteger su privacidad.

¿Tiene alguna pregunta acerca de su participación?

Al final del texto de consentimiento, hay dos preguntas seguidas por espacios para que usted escriba sus iniciales. ¿Puede usted encontrarlos? Le leeré en voz alta sus opciones.

¿Acepte usted a participar en la entrevista telefónica? [ESPERE POR UN SI / NO]. Imprima sus iniciales junto a la alternativa seleccionada, por favor.

¿Desea donar una muestra de saliva, la cual será almacenada con fines de investigación?. [ESPERE POR UN SI / NO]. Imprima sus iniciales junto a la alternativa seleccionada, por favor.

¿Podría usted firmar el formulario y colocar la copia firmada en el sobre con estampilla pre-pagada?. Gracias.

[SI EL SUJETO ACCEDE A DONAR LA MUESTRA DE SALIVA...]

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Antes de empezar la entrevista, comencemos con la colección de saliva. Esto nos debiera tomar cerca de dos minutos. ¿Tiene el paquete frente a usted?.

¿Piensa usted que necesita enjuagarse la boca con agua para deshacerse de cualquier partícula de comida?. [EN CASO **SI**, ESPERE QUE EL SUJETO LO HAGA.]

Le voy a leer las instrucciones. Si tiene preguntas acerca de cualquier paso a seguir, siéntase con el derecho a interrumpirme. Después que termine de leerle las instrucciones, usted puede dejar el teléfono a un lado y seguir los pasos mientras yo la espero al otro lado de la línea.

- 1. Abra el envase, saque el frasco, y escupa adentro su saliva.
- 2. Siga escupiendo hasta que la cantidad de saliva (descontando la espuma) llegue al tope de la etiqueta blanca. En caso que tenga dificultades escupiendo tanta saliva, le puede resultar más fácil escupir tras poner un poco de azúcar blanca en su lengua. Hemos incluido un sobre con azúcar en el paquete, si la necesita.
- 3. Escupa hasta que la saliva alcance la marca blanca, por favor.

Bueno, ahora si lo desea, puede dejar el teléfono a un lado para poder escupir en el recipiente.

¿Está la saliva al tope de la marca blanca? [EN CASO **SI**]. Coloque y apriete la tapa firmemente, por favor, y sacuda el recipiente para mezclar su saliva con los químicos al interior. Ponga, por favor, el recipiente con su saliva junto con el formulario de consentimiento en el sobre con estampilla pre-pagada. Gracias, hemos terminado con la colección de la muestra!.

Ahora vamos a la entrevista. Esto nos tomará entre 40 y 60 minutos dependiendo de sus experiencias. A medida que avanzamos, por favor recuerde:

- No hay respuestas correctas o incorrectas. Por favor, trate de responder las preguntas lo más honesta y exactamente posibles.
- Tome su tiempo
- Si no entiende una pregunta, no dude en hacerme preguntas
- Si hay alguna pregunta que no quiere contestar, solo dígame y la pasaremos a la siguiente pregunta.
- Si necesita tomarse un descanso, sólo hágamelo saber.

Si usted no tiene ninguna otra pregunta, ¿podemos empezar?

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Las primeras preguntas son acerca de sus datos. Q1. ¿Cuál es su fecha de nacimiento? \square/\square $\square/$ 19 \square \longrightarrow A. ¿Y su edad? \square Q2. ¿Cuál es su estado civil? ☐ Soltera, nunca casada anteriormente 2 Casada o conviviendo como casada □₃ Viuda □₄ Separada o Divorciada Q3. ¿Cómo puede usted describir sus antecedentes étnicos (anote todas las que apliquen)? □₂ Americana-Africana ☐₃ Hispana / Latina ☐₁ Blanca / Caucásica **□**₅ Japonesa **□**₆ Filipina □₄ China □₈ Coreana □₉ Sur del Asia / India □₁₀ Vietnamita □₉₇ Polinésica □₉₈ Otra (especifique) _____ □99 Desconocida / declina declarar Ahora tenemos unas pocas preguntas acerca de su nacimiento, niñez, familia y educación. Q4. ¿En que ciudad, estado y país nació usted? A. Ciudad: Estado: B. País: (Si no nació en EEUU, VAYA A C.) C. ¿Qué edad tenía usted cuando llegó a este país a vivir permanentemente? Edad Q5. ¿Por cuántos años ha estado viviendo en su dirección actual? Q6. ¿Como nació usted, parto natural (vaginal) o cesárea? □₁ Natural □₂ Cesárea Q7. ¿Su padre nació en los Estados Unidos? **□**₁ Si → A. ¿En qué país nació él?

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□₁ Si □₂ No □₃ DK	→ A.	¿En qué país	nació ella? _								
Q9. ¿Cuál es el grad écnica? (SI ESTUDIC						ontar	le es	cuela	a voc	acion	al o
A. Padre				B. Madre							
Primaria 🗓		3 4 5	1 6 1 7 1 8	Primaria	□°			\square_3		1 ₅ 1 ₆	
Secundaria 🚨	,	12		Secundaria	 9	10	11	12	•		
Jniversitaria 🗖	3 14 15	16		Universitaria	 13	14	15	16			
Estudios de costgrado	7+			Estudios de postgrado	17+						
ok 📮	9			DK	99						
Q10. ¿Tiene usted algavor, todos sus herm 1 Si 2 No	nanos que au		n fallecido.	ano, hermanastro	o heri	manos	s ado	ptiva	s? Cu	iente,	por

Q8. ¿Su madre nació en los Estados Unidos?

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Q11. Ahora quisiera hacerle algunas preguntas acerca de cada uno de sus hermanos, incluyendo hermastros y hermanos adoptivos. Le preguntare acerca de ellos uno por uno, empezando por el mayor. [SI TIENE MÁS DE UNO: Dígame por favor sus nombres, para que estemos seguros que estamos hablando de la misma persona al mismo tiempo. GRABE LOS

NOMBRES Y LUEGO VUELVA A HACER LAS PREGUNTAS POR CADA HERMANOJ.

Hermano	¿Vivo o	¿Hermana o	¿Año de	Hermano, Medio,	Vivieron lejos por seis	Alguna vez fue
	fallecido?	hermano?	nacimiento?	Hermanastro	o más meses antes	Diagnosticado(a) con Cancer? En caso Si de
				o Adoptado	de cumplir 12 anos?	que tipo
A.	L ₁ Vivo	I ₁ Hermana		山 ₁ Hermano/a	L ₁ Si	L ₁ Si
	2 Fallecido	2 Hermano	□ ₉ DK	☐₂ Medio	□₂ No	□₂ No
1°	□ ₉ DK	☐ ₉ DK		☐₃ Hermanastro	□ ₉ DK	
				4 Adoptado		
				□ ₉ DK		□ ₉ DK
B.	□₁ Vivo	□₁ Hermana		□₁ Hermano/a	□₁ Si	□₁ Si
	☐₂ Fallecido	☐₂ Hermano	□ ₉ DK	☐₂ Medio	□₂ No	□₂ No
2°	□ ₉ DK	□ ₉ DK		☐₃ Hermanastro	□ ₉ DK	
				☐₄ Adoptado		
				□ ₉ DK		□ ₉ DK
C.	□₁ Vivo	□₁ Hermana		☐₁ Hermano/a	□₁ Si	□ ₁ Si
	2 Fallecido	☐₂ Hermano	□ ₉ DK	☐₂ Medio	Q ₂ No	□₂ No
3°	□ ₉ DK	☐ ₉ DK		☐₃ Hermanastro	□ ₉ DK	
				☐₄ Adoptado		
				□ ₉ DK		□ ₉ DK
D.	□₁ Vivo	☐₁ Hermana		☐₁ Hermano/a	☐₁ Si	□ ₁ Si
	2 Fallecido	☐₂ Hermano	□ ₉ DK	☐₂ Medio	□₂ No	Q ₂ No
4°	□ ₉ DK	☐ ₉ DK		☐₃ Hermanastro	□ ₉ DK	
				□₄ Adoptado		
				□ ₉ DK		□ ₉ DK
E.	□₁ Vivo	☐₁ Hermana		☐₁ Hermano/a	□₁ Si	□₁ Si
	2 Fallecido	☐₂ Hermano	□ ₉ DK	☐₂ Medio	□₂ No	□₂ No
5°	□ ₉ DK	□ ₉ DK		☐₃ Hermanastro	□ ₉ DK	
				□₄ Adoptado		
				□ ₉ DK		□ ₉ DK

______ | ____ | ____ | ____ | ____ | ____ | ____ | ____ | ___ | ____ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ | _

	npliera los 12 años, ¿vivió usted por al menos seis meses con niños que no hayan sido sus no primos o hermanos adoptivos?
□₁ Si →	A. ¿Cuántos?
\square_2 No	a. ¿Qué edad tenia cuando esto pasó por primera vez?
	b. ¿Por cuántos años vivió esta persona con usted?
Q13. Antes de cump que no vivían con us	olir los 5 años, ¿fue usted a una guardería? Es decir, una guardería con al menos de 4 niños sted? ?
□₁ Si □₂ No □₃ DK	
Q14. ¿Antes de los	5 años, fue usted a alguna clase preescolar (es decir una escuela antes del kindergarten)?
□₁ Si □₂ No □9 DK	
Q15. ¿Fue usted al	kinder?
□₁ Si □₂ No □₃ DK	
Q16. ¿ Se educó us años?	sted en su casa, en vez de asistir a una escuela fuera de su hogar, antes de cumplir los 18
_	A. ¿Cuántos años?
Q17. ¿Asistió usted	a un internado o vivió en una pensión en su escuela, antes de que cumpliera los 18 años?
\square_1 Si \rightarrow \square_2 No	A. ¿Cuántos años?
Q18. Actualmente, ¿	cuál es el nivel más alto de educación que usted ha completado?
Primaria	
Secundaria	
Universitaria Estudios de	
postgrado	
DK	

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Ahora, le voy a preguntar acerca de su hogar y de diferentes etapas de su vida.

Q19. A la edad... [LEA LA EDAD Y HAGA LAS PREGUNTAS TRABAJANDO CON LAS COLUMNAS]

<u> </u>		., 12, 10, 11 12 0	001121000	<u> </u>	
	Edad	Edad	Edad	Edad	Hoy en
	6 meses	5 años	12 años	30 años	día
A. ¿Vivió usted en una casa o	□₁ Si	□₁ Si	□₁ Si	□ ₁ Si	□ ₁ Si
apartamento arrendado?	☐ ₂ No	☐ ₂ No	☐ ₂ No	□ ₂ No	□ ₂ No
	□ ₉ DK	☐ ₉ DK	☐ ₉ DK	□ ₉ DK	☐ ₉ DK
B. ¿Cuál de las siguientes mejor describe el	□ ₁ Granja	□ ₁ Granja	□ ₁ Granja	□ ₁ Granja	□ ₁ Granja
área donde vivió a esa edad: granja, rural,	☐₂ Rural	□₂ Rural	☐₂ Rural	☐₂ Rural	☐₂ Rural
Pueblo chico, suburbio, o urbanizado / ciudad?	□ ₃ Pueblo	□ ₃ Pueblo	□ ₃ Pueblo	□₃ Pueblo	□ ₃ Pueblo
	☐ ₄ Suburbio	☐ ₄ Suburbio	☐ ₄ Suburbio	☐ ₄ Suburbio	☐ ₄ Suburbio
	□ ₅ Urbano	□ ₅ Urbano	□ ₅ Urbano	□₅ Urbano	□ ₅ Urbano
	□ ₉ DK	□ ₉ DK	□ ₉ DK	□ ₉ DK	□ ₉ DK
C. ¿ Tuvo su casa sistema de agua potable y drenaje	□ ₁ Si	□₁ Si	□₁ Si	□ ₁ Si	□ ₁ Si
?	☐ ₂ No	☐ ₂ No	☐ ₂ No	☐ ₂ No	☐ ₂ No
	□ ₉ DK	□ ₉ DK	□ ₉ DK	☐ ₉ DK	☐ ₉ DK
D. En una escala del 1-5, siendo 1 el menor y 5					
el mayor, póngale nota a su situación financiera					
general en su hogar	☐ ₉ DK	☐ ₉ DK	☐ ₉ DK	□ ₉ DK	□ ₉ DK
E. ¿Piensa en las habitaciones en la casa donde vivía. Cuantos hermanos					
u otras personas dormían en la misma habitación de la	l				
casa donde vivían a esa edad?	☐ ₉ DK	☐ ₉ DK	☐ ₉ DK	☐ ₉ DK	☐ ₉ DK
F ¿Vivió en su casa algunos gatos	□ ₁ Si	□ ₁ Si	□ ₁ Si	□₁ Si	□₁ Si
diariamente?	□ ₂ No	□ ₂ No	□₂ No	□ ₂ No	□ ₂ No
	☐ ₉ DK	□ ₉ DK	□ ₉ DK	☐ ₉ DK	☐ ₉ DK
G. ¿Vivió en su casa algunos perros	□ ₁ Si	□₁ Si	□₁ Si	□₁ Si	□₁ Si
diariamente?	□ ₂ No	□ ₂ No	☐ ₂ No	□ ₂ No	□ ₂ No
	☐ ₉ DK	☐ ₉ DK	☐ ₉ DK	☐ ₉ DK	☐ ₉ DK
H. ¿Tenia otras mascotas peludas como conejos	□₁ Si	□ ₁ Si	□ ₁ Si	□₁ Si	□₁ Si
o hámsters viviendo en su casa diariamente?	□ ₂ No	□₂ No	□₂ No	□ ₂ No	□ ₂ No
o nameters viviends on sa saca dianamente.	□ ₉ DK	□ ₉ DK	□ ₉ DK	□ ₉ DK	□ ₉ DK
I. ¿Vivió cerca de media milla alrededor de	□₁ Si	□₁ Si	☐₁ Si	□ ₁ Si	□₁ Si
	□ ₂ No	□ ₂ No	□ ₂ No	□ ₂ No	□ ₂ No
establos o corrales donde se mantenían caballos,			_		D
vacas, cerdos u otros animales con pezuñas?	□ 9 DK	□ ₉ DK	□ 9 DK	☐ ₉ DK	□ 9 DK

Las próximas preguntas son acerca de sus características físicas a distintas etapas de su vida.

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Las siguientes preguntas son acerca de sus períodos menstruales y embarazos. Q26. ¿Qué edad tenía cuando tuvo su primer período menstrual / ciclo mensual? Edad [Q27. ¿Cuántas veces estuvo usted embarazada? Incluya, por favor, nacimientos terminando en, un bebe fallecido, pérdida, aborto, embarazos ectópicos o tubáricos, y cualquier otro embarazo actual. (Número de embarazos) Q28. ¿En algún tiempo, trató usted de embarazarse por lo menos por un año y no podía? □₁ Si (VAYA A Q29) \square_2 No □₉ DK A. ¿Ha tomado en alguna vez medicinas fertilizantes por prescripción (como clomid u danazol) para tratar de quedar embarazada? \square_1 Si \rightarrow a. ¿Cuantos años tenia cuando empezó hacer esto? \square_2 No □₉ DK

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Las siguientes preguntas son acerca de su primer embarazo.

	Nacimiento singular	□₁ Pase a la pregunta A.
	Múltiples nacimientos	☐₂ ¿Nacieron todos sus bebes con vida? ☐₁ Si ☐₂ No
	Perdida después de 20 seman	
	Pérdida antes de 20 semanas	Pase al siguiente embarazo.
	Aborto Inducido	Pase al siguiente embarazo.
	Ectópico o Tubárico	Pase al siguiente embarazo.
	Actualmente embarazada	☐ ¿Cuándo va a nacer el bebe? Vaya a Q31
	Otro (especifique):	Si es aplicable, pase a la pregunta A. Si es aplicable, pase a la pregunta A.
В. [□ ₉ DK De qué sexo fue el recién nacido ((s)?
В. [
	De qué sexo fue el recién nacido (1 Femenino 2 Masculino	ntos)
	De qué sexo fue el recién nacido (1 Femenino 2 Masculino 3 Ambos (múltiples nacimient Amamantó a su(s) bebe(s) por le	ntos)
	De qué sexo fue el recién nacido (☐ 1 Femenino ☐ 2 Masculino ☐ 3 Ambos (múltiples nacimien ¿Amamantó a su(s) bebe(s) por lo	ntos) o menos dos semanas?
	De qué sexo fue el recién nacido (☐ 1 Femenino ☐ 2 Masculino ☐ 3 Ambos (múltiples nacimien ¿Amamantó a su(s) bebe(s) por lo	ntos) o menos dos semanas? tenía el o los bebes cuando lo(s) dejó de amamantar?

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Ahora, quisiera preguntarle acerca de otros niños con los cuales usted haya compartido un buen tiempo de su vida de adulto.

Q31. ¿Ha adoptado alguna vez niños?

do C. la adoptado	algana voz mi	
□₁ Si □₂ No (VA	→ ×^ ^ 033)	A. ¿Cuantos?
■2 NO (VA	1A A Q33)	B. ¿Qué edad tenia el niño cuando llegó a vivir con usted?
		C. Después de eso, pero antes de que el niño cumpliera los 12 años, ¿hubo períodos de tiempo sobre los 6 meses en que el niño no vivió con usted?
		□₁Si → a. Describa □₂No
Q32. ¿Tiene usted a	algún nieto?	
□₁ Si →	A. ¿Cuántos	? □
☐ ₂ No		Vivió usted con alguno de ellos por al menos un año antes de que ellos lieran los 12 años?
		□₁ Si → a. ¿Qué edad tenia usted cuando esto ocurrió? □□□□₂ No
Q33. ¿Crió usted al	gún niño que no	o haya sido biológico o adoptado, tal como sobrino o hijastro?
□₁ Si □₂ No	→ A. ¿(Cuántos?
	B. ¿(Qué edad tenía el menor cuando vino a vivir con usted?
		espués de eso y antes de que el menor cumpliera los 12 años, ¿hubo períodos mpo sobre los 6 meses en que el menor no vivió con usted?
		□₁Si → a. Describa
Q34. ¿Se desempe	ño alguna vez d	como profesora o cuidadora de niños profesional por lo menosun año?
□₁ Si □₂ No	→ A. ¿٦	Γrabajó con niños menores de 5 años?
		□₁ Si → a. Describa su trabajo, por favor

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 \square_2 No

Ahora, tengo nuevas preguntas acerca de otros aspectos de su salud reproductiva. Primero, quisiera preguntarle acerca de cualquier hormona femenina que haya utilizado. Le preguntare primero acerca de píldoras para el control de la natalidad y luego acerca de terapias de reemplazo de hormonas.

Q35. ¿Ha usted ingerido píldoras de control de la natalidad, también conocidas como anticonceptivo oral o "la

píldora" por un mes o más? A. ¿A qué edad empezó a tomarlas? **∐**₄ Si B. ¿Qué edad tenía usted cuando las tomó por última vez? \square_2 No C. Durante ese tiempo, ¿hubo algún período de tiempo en el cual dejó de tomar la píldora por alguna razón, como por ejemplo para quedar embarazada? □₁ Si → a. ¿Por cuántos meses o años dejó de tomar la píldora, entre las edades de ___ y ___ años? meses o años □₂ No Q36. ¿Hizo alguna vez un tratamiento para síntomas menopausicos con prescripción médica consistente en hormonas por un mes o más? **□**₁ Si A. ¿Las ha usado durante los últimos tres meses? □₂ No **□**₁ Si D₂ No B. ¿Qué edad tenía usted cuando comenzó a tomarlas? **∟**l años C. ¿Qué edad tenía usted la ultima vez que las tomó? D. ¿Dejó alguna vez de tomarlas temporalmente? → a. ¿Por cuántos años dejó el tratamiento de hormonas entre las edades de y años? \square meses o años □₂ No E. ¿Cesaron sus períodos menstruales por lo menos seis meses antes de empezar con su tratamiento hormonal? a. ¿A qué edad cesaron? **∐**₄ Si □₂ No F. ¿Qué tipo de tratamiento de hormonas ha usado más frecuentemente? ■₁ Estrógeno y progestin combinadas (Prempro, Premphase, FemHRT, Estratest) ☐2 Píldoras de solo estrógeno (Premarin, Estrace, Ogen) ☐₃ Crema o parche de estrógeno [VAYA A Q38]

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Q37. ¿Tiene a	actualmente peri	odos menstruales regularmente?
	□₁ Si	
	□ ₂ No→	A. ¿Qué edad tenia usted cuando tuvo su último período?
		B. ¿Cesaron sus períodos en forma natural o por intervención quirúrgica o médica (como quimioterapia)?
		☐₁ Naturalmente ☐₂ Intervención quirúrgica / médica
Q38. ¿Ha uste	ed tenido alguna	vez una histerectomía, es decir, extirpación de su útero?
	$\Box_1 \operatorname{Si} \to A$ $\Box_2 \operatorname{No}$	¿Qué edad tenía usted cuando tuvo esta operación?
Q39. ¿Ha uste	ed alguna vez te	nido una ooforectomía, es decir, extracción de uno o ambos ovarios?
	□₁ Si -	A. ¿Le removieron uno o ambos ovarios? ☐₁Uno ☐₂ Ambos
		B. ¿Qué edad tenía usted cuando tuvo esta operación?
Ahora, tengo [AÑO DE REF	unas pocas p ERENCIA.]	reguntas acerca de su cuidado médico entre [AÑO DE REFERENCIA −5] y
		or un seguro médico (incluyendo HMOs, PPOs, Medi-Cal, Programa de Asistencia uro, durante ese tiempo?
	cubierta todo el cubierta pero no	•
Q41. ¿Cuántas	s mamografías s	e hizo durante este período de cinco años?
	l	
Q42. ¿Cuántos	s revisiones gine	cológicas se hizo durante ese período de cinco años?
	1	

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Q43. ¿Ha sido alguna vez diagnosticada con cáncer? □₁ Si A. ¿Qué tipo de cáncer(es) ha tenido? Sea los más especifica posible, por favor \square_2 No \rightarrow (VAYA A Q45) B. ¿Qué edad tenía cuando fue diagnosticada con cáncer la primera vez? C. ¿Qué tipo de tratamientos recibió después de su primer diagnóstico? □₁ Cirugía ☐₂ Radiación □₃ Quimioterapia ☐4 Terapias inmunológicas como Herceptin (tratamiento contra la metástasis del cáncer mamario) D. ¿Ha tenido usted algún tipo de recaída desde el primer diagnóstico? □₁ Si D₂ No Q44. Ha tenido alguna vez una biopsia mamaria que muestre que usted tenga un tumor mamario benigno? □₁ Si A. ¿Qué edad tenía usted la primera vez que tuvo una biopsia por un tumor \square_2 No mamario? Q45. ¿Ha sido su padre alguna vez diagnosticado con cáncer? **□**₁ Si A. ¿Qué tipo de cáncer(es) tuvo él? a. ¿Qué edad tenia él cuando fue diagnosticado por primera vez? □₂ No Q46. ¿Ha sido su madre alguna vez diagnosticada con cáncer? **□**₄ Si A. ¿Qué tipo(s) de cáncer(s) tuvo ella? ☐₂ No a. ¿Qué edad tenia ella cuando fue diagnosticada por primera vez? ☐₉ DK

Ahora tengo unas pocas preguntas acerca de usted y el pasado de su familia en relación con cáncer.

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A continuación tengo preguntas acerca de otros aspectos de su historial médica. ¿Le ha dicho alguna vez un doctor que usted tuvo...

Q47.				Edad dei <u>primer</u> diagnostico
A. Infección por parásitos como oxiuro blanco (pidulle), malaria o esquistomiasis?	□₁ Si↓ a. En tipo(s):_	□ ₂ No caso SI, es	D ₉ DK	el o los
B.cristal varicela (viruelas locas)?	□₁ Si	□₂ No	□ ₉ DK	Edad 🔲 🔲
C. Sarampión, el tipo que dura cerca de 10 días?	J ₁ Si	☐ ₂ No	□ ₉ DK	Edad
D. Mononucleosis infecciosa, también conocido "mono" o "enfermedad del beso "?	□ ₁ Si	□₂ No	☐ ₉ DK	Edad 🔲 🔲
E. Herpes zóster (también conocido como "culebrilla", ampollitas dolorosas en la piel)??	□ ₁Si↓	☐ ₂ No	□ ₉ DK	Edad
		SO SI, antes NCIA], ¿cuár	-	
F. Mastitis (una infección mamaria)?	□₁ Si↓ a. En cas amamant □₁;			to cuando
G. Clamidia?	□ ₁ Si	☐ ₂ No	□₃DK	Edad
H. Infecciones en las vías urinarias, más de 5 veces en su vida?	□₁Si	□ ₂ No	□₃DK	Edad 🔲 🗖
I. Infecciones con levadura, más de 5 veces	□₁Si	□ ₂ No	□₃DK	Edad 🔲 🔲
en su vida? J. Herpes en su área genital?	□₁Si	□₂ No	□₃DK	Edad 🔲 🗖
K. Una úlcera estomacal causada por helicobacteria pilórica, una bacteria que vive en su estómago?		☐₂ No so SI, ¿cuánta or esta úlcera		
L. infección transmitida por garrapatas?	□₁Si	□₂ No	□₅DK	Edad 🔲 🔲
M. Diabetes, el tipo que requiere insulina?	□₁Si	☐ ₂ No	□ ₉ DK	Edad 🔲 🔲
N. Gingivitis, una enfermedad en las encías que requiere hacer cirugía?		□₂ No so SI, ¿cuánta n sus encías?		Edad tenido

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constipada, ojos lagrimosos severa, o choque anafiláctio	erca de alergias. Por alergias, estamos hablando de los siguientes síntomas: nariz s, congestión o estornudos, ahogo o asma, urticaria o sarpullido en la piel, hinchazón co (alérgico). ¿Ha sido usted alguna vez alérgica a las siguientes: polvo, animales, nida, picadura de insectos, medicamentos u mojo?
□₁ Si □₂ No → (VAYA A	Q57)
Q49. ¿Ha tenido alguna vez	z una reacción alérgica al polvo casero?
□₁ Si → □₂ No	A. ¿Qué tipo de reacción alérgica tuvo? (Verifique todas las que apliquen) \[\begin{align*} \text{\t
O50 :Tuyo alguna yez una	C. ¿A que edad tuvo por última vez una reacción alérgica a polvo casero?
Perros 2 Gatos 3 Caballos 4 Ratones, ratas,	
□₁ Si → □₂ No	A. ¿Qué tipo de reacción alérgica tuvo? (Verifique todas las que apliquen) \[\begin{align*} \text{\t

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Q51. ¿Ha sido alguna vez alérgica a árboles, pasto, mala hierba o polen?	
A. ¿Qué reacción alérgica tuvo? (Verifique todas las que apliquen) □¹ Nariz congestionada □² Ojos lagrimosos e irritantes □₃ Estornudos / congestion □⁴ Ahogo / asma □⁵ Urticaria / sarpullidos □⁶ Hinchazón severa □¬ Choque Anafiláctico o alérgico B. ¿A qué edad notó por primera vez esta alergia? □□ C. ¿A qué edad tuvo por última vez una reacción alérgica a árboles, pasto, rehierba o polen? □□□	nala
D. Aproximadamente, ¿cuántos meses de un año típico ha sido afectada por alergia?	esta
Q52. ¿Ha tenido alguna vez una reacción alérgica a comidas tales como: (verifique todas las que apliquen)	
 ☐ Huevos? ☐ Productos lacteos? ☐ Pescado (no mariscos)? ☐ Mariscos? ☐ Trigo? ☐ Cacahuates? ☐ Soya? ☐ Otros (Especifique) 	_
□₁ Si → A. ¿Qué reacción alérgica tuvo? (Verifique todas las que apliquen) □₁ Nariz congestionada □₂ Ojos lagrimosos / irritados □₃ Estornudos / congestión □₄ Ahogo / asma □₅ Urticaria / sarpullidos □₆ Hinchazón severa □٫ Choque Anafiláctico o alérgico B. ¿A qué edad tuvo su primera reacción alérgica a la comida? □□	
C. ¿A qué edad tuvo su última reacción alérgica a la comida? 🔲 🗀	

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		D. ¿Cuántas veces aproximadamente en total tuvo una reacción alérgica a la comida?
		número de reacciones
Q53. ¿Tuvo alguna v	ez una	reacción alérgica a abejas, avispón o picadura de avispa?
□₁ Si □₂ No	\rightarrow	A. ¿Qué reacción alérgica tuvo? (Verifique todas las que apliquen)
		☐₁ Nariz congestionada
		☐₂ Ojos lagrimosos / irritados
		☐₃ Estornudos / congestión
		□₄ Ahogo / asma
		☐₅ Urticaria / sarpullidos
		☐₅ Hinchazón severa
		☐ ₇ Choque Anafiláctico o alérgico
		B. ¿A qué edad tuvo esta primera reacción alérgica?
		C. ¿A qué edad tuvo su última reacción alérgica a las picaduras de insectos?
		D. ¿Cuántas reacciones alérgicas a picadura de insectos podría estimar que tuvo
		en su vida?
Q54. ¿A tenido algur	na vez u	na reacción alérgica a moho?
□₁ Si □₂ No	\rightarrow	A. ¿Qué reacción alérgica tuvo? (Verifique todas las que apliquen)
		□₁ Nariz congestionada
		☐₂ Ojos lagrimosos / irritados
		□₃ Estornudos / congestión
		□₄ Ahogo / asma
		☐₅ Urticaria / sarpullidos
		☐ Hinchazón severa
		☐₂ Choque Anafiláctico o alérgico
		B. ¿A qué edad tuvo esta primera reacción alérgica?
		C. ¿A qué edad tuvo su última reacción alérgica al moho?
		D. ¿Cuántos meses fue afectada por su alergia al moho, en un año típico?
		□ □ meses

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Q54a	. ¿A tenido algı	una vez	una reacción alérgica a una(s) medicación(es)?
	□₁ Si □₂ No	\rightarrow	A. ¿Qué tipo(s):?
			B. ¿Qué reacción alérgica tuvo? (Verifique todas las que apliquen)
			☐₁ Nariz congestionada ☐₂ Ojos lagrimosos / irritados
			☐₃ Estornudos / congestión
			☐₄ Ahogo / asma
			☐₅ Urticaria / sarpullidos
			☐ Hinchazón severa
			☐ ₇ Choque Anafiláctico o alérgico
			C. ¿A qué edad tuvo esta primera reacción alérgica?
			D. ¿A qué edad tuvo su última reacción alérgica a esta medicación?
Q55.	¿Recibió inyed	cciones	semanales o mensuales contra la <u>alergia</u> , antes de [AÑO DE REFERENCIA]?
	□₁ Si	\rightarrow	A. ¿A qué edad las recibió por primera vez?
	□₂ No		 B. ¿A qué edad fue su ultima inyección contra la alergia? C. ¿Por cuántos meses o años en total recibió inyecciones contra la alergia?
	¿Tomo alguna ERENCIA]?	vez an	tihistamina para minimizar los síntomas de la alergia, antes de [AÑO DE
	□₁ Si □₂ No	\rightarrow	A. ¿Cuántos años durante los <u>últimos 20 años</u> tomó antihistaminas para minimizar los síntomas de la alergia en forma ocasional o regular?
			☐ ☐ Años
			a. Y durante esos [#] años, ¿aproximadamente cuántos <u>meses por año</u>
			tomó antihistaminas (para las alergias)? 🔲 🔲 Meses
Q57.	¿Le han opera	ıdo en a	alguna vez para remover sus amígdalas/anginas?
	□₁ Si □₂ No	\rightarrow	A. ¿A qué edad fueron removidas?
Q58.	¿Le han opera	ıdo en a	alguna vez para remover el apéndice?
	□₁ Si □₂ No	→	A. ¿A qué edad se lo removieron?

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Q59.	9. ¿Le han operado en alguna vez para remover el bazo? (esplenectomía)		
	□₁ Si □₂ No	\rightarrow	A. ¿A qué edad se lo removieron?
			B. ¿Por qué le quitaron el bazo (por qué condición o enfermedad)?
Q60.	¿Tomó alguna	vez ant	ibióticos entre [AÑO DE REFERENCIA-5] y [AÑO DE REFERENCIA]?
	□₁ Si	\rightarrow	A. ¿En cuántas ocasiones tomó una serie de antibióticos durante esos 5 años?
	\square_2 No		ocasiones
	☐ ₉ DK		

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Por último, tengo unas pocas preguntas acerca de otros aspectos de su estilo de vida y salud. Las primeras preguntas son acerca del consumo de alcohol en diferentes etapas de su vida. Tenga presente que 1 trago es una botella, lata o vaso de cerveza, una copa de vino, champaña o vino helado, o un cóctel, cortito, o mezcla de licor.

Q61. ¿Como promedio, entre los años [READ AGE BELOW HERE], Cuantos tragos de [READ ALCOHOL TYPE] tomó usted por semana? [ENTER AMOUNT. IF LESS THAN 2 DRINKS/MONTH, ENTER 0]. Como promedio, cuantos días por semana tomó usted al menos de un trago? Recuerda que 1 trago es una botella o vaso de cerveza, un vazo de vino o champaña, o un cóctel, trago de licor, o trago combinado.

Q62.	¿Ha fumado alguna vez al menos un cigarrillo por día durante más de 3 meses consecutivos?
	\square_1 Si \square_2 No \rightarrow (VAYA A Q67)
Q63.	¿Qué edad tenía cuando empezó a fumar esa cantidad de cigarrillos?
Q64.	Cuándo fumaba, ¿cuántos cigarrillos en promedio fumó por día?
	por día
Q65.	¿Fuma actualmente, es decir, ha fumado al menos un cigarro por día en los últimos tres meses?
	□₁ Si □₂ No → A. ¿Qué edad tenía cuando dejó permanentemente de fumar? □□
Q66. tempo	¿Cuántos años en total fumó cigarrillos, excluyendo los períodos de tiempo en los cuales lo dejó pralmente?
	□ □ años
Q67.	¿Ha alguna vez recibido radio terapia en el área de su pecho, excluyendo radio terapia por cáncer al seno?
	□₁ Si → A. ¿Para qué tipo de condición?

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¿Cuántos días por mes, en promedio comió los siguientes tipos de comida entre [AÑO DE REFERENCIA-2] y [AÑO DE REFERENCIA]:
Q68. Yogurt (no del tipo congelado)?
días / mes
Q69. Kim chee o chukrut (repollo fermentado)?
días / mes
Q70. Lacto bacilo o suplemento probiótico?
días / mes
Q71. Finalmente, ¿cuántas veces en su vida fue picada por abejas o avispas?
□□ veces

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NORTHERN CALIFORNIA CANCER CENTER

2201 Walnut Avenue, Suite 300, Fremont, CA 94538 - (510) 608-5000 - FAX (510) 608-5095

INSTITUTIONAL REVIEW BOARD MEMO OF ACTION TAKEN

TO: Christina Clarke, Ph.D. DATE: October 19, 2006

FROM: Carol D'Onofrio, Dr.P.H.; Sara L. Tobin, Ph.D.

Chair, Institutional Review Board

SUBJECT: 2005-004 The Hygiene Hypothesis and Breast Cancer: A Novel Application of an

Etiologic Theory for Allergies, Asthma and Other Immune Disorders

Date of Full Board Review: 10/17/2006 Application for Continuation & Modification

Any Modification to the study that affects the participation of human subjects must receive prior approval from the IRB.

Any complications related to subject participation; including adverse drug reactions and subject complaints must be reported immediately to the IRB. Please submit this information to the Legal and Regulatory Affairs Officer.

The Institutional Review Board (IRB) of the Northern California Cancer Center has reviewed the above referenced research project and have made the following determination:

The submission was given continuing approval as requested. The various modifications to the questionnaire instrument were approved as requested.

The Board has made the following suggestions:

Consider including a word such as project or study following the adjectives "important research" in line 2 of the first paragraph on page 2 of the questionnaire.

Please also consider whether the phrase, "plastic hazardous bag" is optimal as it implies the bag itself is hazardous versus options such as "the enclosed plastic bag," or "the enclosed plastic bag for hazardous materials."

Third, the phrase "Check all that applies," which appears on several pages including 15, 19, and 20 may be revised to read, "Check all that apply."

Finally, the IRB suggests a "do not seal the envelope" instruction for the bottom of page two of the questionnaire if it understands the protocol correctly that the saliva samples are to be enclosed in the same envelope, subsequently, for return to NCCC.

NORTHERN CALIFORNIA CANCER CENTER

2201 Walnut Avenue, Suite 300, Fremont, CA 94538 - (510) 608-5000 - FAX (510) 608-5095

INSTITUTIONAL REVIEW BOARD MEMO OF ACTION TAKEN

SUBJECT: 2005-004 The Hygiene Hypothesis and Breast Cancer: A Novel Application of an

Etiologic Theory for Allergies, Asthma and Other Immune Disorders

(CONTINUED)

As a courtesy to the IRB, please inform the Board in writing if you adopt any of the suggestions above. These are items that the Board believes will improve the research activities involving human subjects.

The protocol number 2005-004 must be used on all applications and correspondence related to this study.

Project approval will expire on October 16, 2007. If the project is to continue beyond that date, it must be reviewed not less than on an annual basis and in accordance with the Cancer Center's Federal-Wide Assurance (FWA00005005).

cc: IRB file Page 2 of 2